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Lactation Performance of Murrah-Improved Dairy Buffalo Grazing on Improved Pasture

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Presenter Information

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Lactation performance of murreh-improved dairy buffalo grazing on improved pasture

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Key words: lactation, dairy buffalo, grazing, improved pasture

Introduction Water buffalo are heat-tolerant and tick-resistant, which is favorable to breeding in some tropical and sub-tropical areas where the Holstein dairy cattle don't perform well. Today, the function of water buffalo is changing from draught into milking use to supply high quality milk, that increases farmer household income. Our experiment studied the milking producing ability of Murrah-improved buffalo from legume-based pasture at the Yunnan Beef Cattle & Pasture Research Center, Xiaoshao, located in the eastern suburb of Kunming, P. R. China, at 1960m altitude, average rainfall of 960mm per annum, average temperature of 14.5°C and pasture yield of 6.5 t DM per ha.

Materials and methods Forty, F1 Murrah-improved dairy buffalo in their first lactation of 50% Murrah × 50% Yunnan Buffalo parentage, were raised 24 h grazing, without any supplementary feeding. Mothers and calves were separated soon after calving. Cows were milked by hand twice a day at 0700 and 1900 h and milk yield recorded. Detailed Milk composition was measured with the MILKSCAN (made in Sweden) on 9 milk samples from day 200 of lactation. Data analysis was done using the SAS statistical package.

Results The Murrah-improved dairy buffalo (F1), milked for 321.5 d on average (range 275-365 d) which was 63.2 days longer ($P < 0.01$) than Yunnan Buffalo (YB), which ranged from six to ten months, milked for 258.3 days (range 180-305 d) only. The average milk yield for F1 was 2045.4 kg and 6.4 kg per day, which was twice that of YB at 3.2 kg per day.

The period of high milk output appeared during the five and a half months after calving when the daily output of milk was maintained over 6.0 kg per head. During that period, the milk yield of F1 buffalo grew rapidly to over 8.0 kg per day in the second month after calving and lasted for two months until the fourth month when it arrived at the lactating peak of about 8.5 kg per day. Then it fell significantly from 6.0 kg per day to 4.0 kg per day at the tenth month until the milk yield gradually went to about 2.0 kg per day. Seen as (Figure 1).

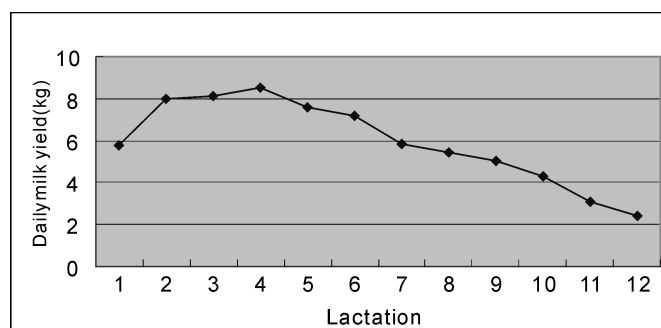


Figure 1 Water buffalo milk yield curve.

Raising buffalo, especially Murrah-improved buffalo for milk is a quick way to increase farmers' income. From survey results, one dairy Murrah-cross buffalo yearling could be sold for about \$ US 300-400, which \$ US 200 higher than local buffalo at the same age. Besides, average annual milk yield of F1 animals was 1600 kg per head, which was twice that of local buffalo. At present, the market price of buffalo milk is \$ US 1 per kg, so farmers could make a net profit of at least \$ US 1000 by raising one improved dairy buffalo.

Conclusions This experiment provided some evidence to promote the improvement of dairy buffalo breeds and demonstrated great market potential of developing dairy buffalo industry in Yunnan province in the future.

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